

Tennessee Pollution Prevention Partnership Success Story



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Electricity Usage Reduction

The Member

Bridgestone/Firestone North American Tire, LLC, (BFNT) Warren County plant began manufacturing truck and bus tires in 1990. The plant employs approximately 1025 team members involved in producing thousands of truck and bus tires each day. BFNT company-wide has been dedicated to environmental excellence and continuous improvement as demonstrated by all of our North American tire plants achieving ISO 14001 certification by the year 2000. BFNT Warren is also a Charter Member of the EPA National Environmental Performance Track. We continue to look for opportunities to eliminate and reduce waste, save natural resources, and prevent pollution.



The Story

The Warren County plant is one of the most automated tire manufacturing plants in the United States. Electrical motors are used throughout the facility along with computers, fans, HVAC etc. Compressed air from electric powered compressors is also used throughout the facility for power tools, cylinders, controls and other miscellaneous use. Steam power is used for the curing presses, but our major energy usage is electricity, approximately 81% of the total power usage. The 6% reduction in electrical usage goal equals to 8.7 Million Kilowatts-hours per year, enough electricity for 580 households (average 15,000 KWH/year). Nearby Morrison Tennessee consists of ~254 households! The reduction in electricity usage

was accomplished through computerized controls, energy-saving production scheduling procedures, maintaining a "no loss" plan for air, steam and oil, and an aggressive preventative maintenance program for the HVAC systems and air compressors. Examples of energy saving practices include weekly audits for air, steam and oil leaks, computerized HVAC systems including more than 100 exhaust fans, specialty lubricants for the electric air compressors and shutting down the large rubber mixers when rubber inventory is sufficient. The 5 rubber mixers at Warren are powered with two 2,000 horsepower electric motors. Shutting a rubber mixer down for one day when it is not absolutely needed saves ~\$1,600 a day in power costs.

The Success

BFNT Warren County committed to reduce plant electricity usage from 134.7 Million Kilowatt-hours (MMKWH) (2001 baseline) to 126 MMKWH normalized electricity usage by December 31, 2003. This 8.7 MMKWH reduction (6%) reduces energy costs for the facility, and reduces the pollution associated with electricity generation. The actual normalized electricity use for 2003 was 124.1 MMKWH. This 8% reduction or 10.6 MMKWH is enough electricity for 707 households!

The Pollution Prevented

In 2003, Warren County used 124.1 Million Kilowatt-hours of electricity normalized for production compared to 134.7 MMKWH in 2001, an 8% reduction. Taking in account of the reductions in electrical use for 2002 and 2003, 18.6 MMKWH of electricity was not used reducing energy costs for Warren and reducing the air pollution associated with electricity generation.

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TENNESSEE POLLUTION PREVENTION PARTNERSHIP
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